

Remarks

Claims 79-90 are pending in the application.

The pending claims directed to semiconductor fabrication stand rejected as obvious in view of AAPA and the decorative lamp reference of Hume. Applicants requests the Examiner reconsider this rejection in view of the following remarks.

“Section 103 forbids issuance of a patent when ‘the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.’” *KSR Int’l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1734, 82 USPQ2d 1385, 1391 (2007). One must question “whether the improvement is more than the predictable use of prior art elements according to their established functions.” *Id.*

The Supreme Court stated that there are “[t]hree cases decided after *Graham* [that] illustrate this doctrine.” *Id.* at 1739, 82 USPQ2d at 1395. “In *United States v. Adams*, ... [t]he Court recognized that when a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result.” *Id.* at 1739-40, 82 USPQ2d at 1395. “*Sakraida and Anderson’s-Black Rock* are illustrative – a court must ask whether the improvement is more that the predictable use of prior art

elements according to their established function.” *Id.* at 1740, 82 USPQ2d at 1395.

The Supreme Court stated that “[f]ollowing these principles may be more difficult in other cases than it is here because the claimed subject matter may involve more than the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for the improvement.” *Id.* The Court explained, “[o]ften, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *Id.* at 1740-41, 82 USPQ2d at 1396. The Court noted that **“[t]o facilitate review, this analysis should be made explicit.”** *Id.*, citing *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006) (**“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”**).

Claim 79 recites an apparatus that includes a plurality of reflectors above the lamps, wherein the reflectors have a rugged reflective surface that does not extend below the lamps.

The examiner has relied on Hume in combination with AAPA to meet the above features of claim 79. To support this combination, the Examiner has provided the following:

*It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided reflectors having a rugged, reflective surface in AAPA in order to design **a light source capable of directing light precisely**, permitting highlighting and profiling and **a well controlled beam of light** and also in order **to allow most of the heat from the light to pass backwards through the reflector** whilst directing the beam forwards as taught by Hume et al.*

With reference to the Applicants originally filed specification, what the Examiner opines as the rationale for combining the cited references is exactly what the inventor literally describes as the problems they were attempting to avoid when creating the claim apparatus. The Examiner opines that the rationale for combining these references is:

a light source capable of directing light precisely;
a well controlled beam of light; and
to allow most of the heat from the light to pass backwards through the reflector.

The Examiner is directed to pages 2, 9, and 10 of the originally filed specification where the Applicant, upon filing the application, describes some of the shortcomings of the prior art. Specifically with reference to paragraph [0004], the lamp heated thermal deposition apparatus is described as well as

some of the problem of incident radiation from overlaps which can cause annular regions of the substrate corresponding in position to overlap areas to be hotter than other areas of the substrate not so overlapped.

It must be recognized that this is a thermal deposition apparatus that utilizes lamp heat. As such “allowing most of the heat from the light to pass backwards through the reflector” would likely result in the apparatus failing to perform its intended function. As such, supporting this combination for this reason cannot be considered rational as required by the Supreme Court.

Referring to [0036], the Applicant describes “that diffusion of the radiant energy from the lamps can be advantageous. Specifically, diffusion of the radiant energy can spread the hot spots associated with overlap regions over wider areas, which can ultimately lead to better temperature uniformity than is achieved with prior art apparatuses.” The Applicant goes on to describe the diffusion of light using the apparatus of Fig. 5.


From this it is clear, “directing light precisely” as well as “a well controlled beam of light” is not the “diffusion” the Applicant desires and further that the Applicant has recognized as a drawback of the prior art. As such, combining the references for the same reasons as the shortcomings of the prior art cannot be considered rational.

For at least these reasons, the combination of the cited references is not compliant with the Supreme Court’s recent holding in KSR and must be withdrawn.

If the Examiner's next anticipated action is to be anything other than a Notice of Allowance, the Examiner is requested to contact the undersigned at (509) 624-4276 between 8:00 a.m. and 5:00 p.m. (PST).

Respectfully submitted,

Dated: 3/24/09

By: 
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